Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for controlling a motorized mechanism in the event of external power loss, the motorized mechanism comprising first and second motors coupled to a common driving circuit, said first motor being arranged to rotate at a substantially constant rate with external electrical power applied to the driving circuit, wherein in the event of loss of said external electrical power to the driving circuit, the driving circuit is controlled so as to repeatedly connect and disconnect the first and second motors to the driving circuit in substantially out-of-phase synchronism to enable said second motor to be driven with electrical power derived from back-emf of the rotating first motor.

2. (Previously Presented) A method as claimed in claim 1, wherein the motorized mechanism comprises a driving mechanism for a data storage device, wherein the first motor is a spindle motor and the second motor is a read/write head positioning motor.

3. (Previously Presented) In a disk drive having a spindle motor for rotating a data storage disk and a head positioning motor for positioning a read/write head, the spindle motor and positioning motor being coupled to be driven from an external power source by way of a driving circuit, a method for controlling the motors in the event of loss of said external power source during rotation of the spindle motor wherein the spindle motor and positioning motor are repeatedly switched on and off from the driving circuit substantially in out-of-phase synchronism to enable said positioning motor to be driven with electrical power derived from back-emf of the rotating spindle motor.

4. (Previously Presented) A method as claimed in claim 3, wherein the spindle motor is coupled to an upper and a lower supply rail of the driving circuit by way of a plurality of respective upper and lower semiconductor switching elements having parallel diode elements, and wherein switching on of the spindle motor corresponds to switching of the lower switching elements to connect the spindle motor to the lower supply rail, and switching off of the spindle motor allows back-emf derived from the spindle motor to generate a recirculating current through the upper switching elements to the upper supply rail.

5. (Original) A method as claimed in claim 4, wherein the positioning motor is coupled to the upper and lower supply rails of the driving circuit by pairs of upper and lower semiconductor switching elements, and wherein switching on of the positioning motor corresponds to switching on a selected one of the pairs of switching elements to connect the positioning motor to the upper and lower supply rails to drive the positioning motor with said recirculating current.

6. (Currently Amended) A method for controlling a disk drive having a spindle motor and a positioning motor both coupled to a driving circuit, comprising the steps of:

detecting a loss of supply power to the driving circuit;

repeatedly chopping a connection between the spindle motor and the driving circuit to generate an intermittent back-emf derived recirculation current; and

repeatedly chopping a connection between the positioning motor and driving circuit at least substantially synchronized out-of-phase with the chopping of the spindle motor connection to enable driving of the positioning motor using the recirculation current.

7. (Currently Amended) A data storage device having a spindle motor for rotatably driving a spindle and/or disk, a positioning motor for positioning a read and/or write head, and a motor driving circuit coupled to controllably drive the spindle motor and positioning motor under normal operation using an external power supply, the motor driving circuit including a controller adapted to respond to loss of said external power supply by repeatedly

chopping ~~connection~~ connections between the driving circuit and the spindle and positioning motors respectfully in a substantially synchronized out-of-phase manner to enable driving of the positioning motor with a recirculation current derived from a back-emf of the spindle motor.

8. (Previously Presented) A data storage device having a spindle motor for rotatably driving a spindle and/or disk, a positioning motor for positioning a read and/or write head, and a motor driving circuit coupled to controllably drive the spindle motor and positioning motor under normal operation using an external power supply, the motor driving circuit including a controller adapted to respond to loss of said external power supply by chopping connection between the driving circuit and the spindle and positioning motors respectfully in a substantially synchronized out-of-phase manner to enable driving of the positioning motor with a recirculation current derived from a back-emf of the spindle motor wherein the driving circuit has an upper and a lower supply rail coupled to receive the external power supply under normal operation, and includes a storage capacitor and a voltage clamp coupled to the upper supply rail.

9. (Previously Presented) The data storage device of claim 8, wherein the spindle motor is coupled to the upper and lower supply rails of the driving circuit by way of a plurality of respective upper and lower semiconductor switching elements having parallel diode elements, and wherein chopping of the spindle motor corresponds to alternately switching on and off the lower switching elements to connect the spindle motor to the lower supply rail, wherein switching off the lower switching elements allows back-emf derived from the spindle motor to generate a recirculation current through the upper switching elements to the upper supply rail.

10. (Previously Presented) The data storage device of claim 8, wherein the positioning motor is coupled to the upper and lower supply rails of the driving circuit by pairs of upper and lower semiconductor switching elements, and wherein chopping of the positioning motor corresponds to switching on and off a selected one of the pairs of switching elements to connect and disconnect the positioning motor to the upper and lower supply rails to selectively drive the positioning motor with said recirculating current.

11. (Previously Presented) A motorized mechanism comprising:

a first motor;

a second motor;

a terminal for receiving external power; and

a controller coupled to the first motor, the second motor and the terminal for receiving external power and comprising a power rail, wherein the controller is configured in a first mode of operation to generate control signals to operate the first motor at a substantially constant speed and in a second mode of operation to extract power from the first motor for operating the second motor by generating control signals to repeatedly connect and disconnect the power rail from the first and second motors substantially in out-of-phase synchronization.

12. (Previously Presented) The motorized mechanism of claim 11 wherein the motorized mechanism is a data storage device further comprising a spindle and the first motor drives the spindle.

13. (Previously Presented) The motorized mechanism of claim 12 further comprising a storage capacitor and a voltage clamp coupled to the power rail.

14. (Currently Amended) A motorized mechanism comprising:

a first motor;

a second motor;

a terminal for receiving external power; and

a controller coupled to the first motor, the second motor and the terminal for receiving external power and comprising a power rail, wherein the controller is configured in a first mode of operation to generate control signals to operate the first motor at a substantially constant speed and in a second mode of operation to extract power from the first motor for operating the second motor by generating control signals to cyclically chop connections between the power rail and the first and second motors substantially in out-of-phase synchronization.

15. (Previously Presented) The motorized mechanism of claim 14 wherein the motorized mechanism is a data storage device further comprising:

a spindle, wherein the first motor drives the spindle; and

a storage capacitor and a voltage clamp coupled to the power rail.

16. (Previously Presented) The motorized mechanism of claim 15 wherein the controller is configured to generate the control signals in the second mode of operation such that an average current conducted through the storage capacitor and the voltage clamp is positive.

17. (Previously Presented) The method of claim 2 wherein the motorized mechanism further comprises a storage capacitor and a voltage clamp coupled to a power rail and the driving circuit is controlled such that an average current conducted through the storage capacitor and the voltage clamp is positive.

18. (Previously Presented) The method of claim 3 wherein the disk drive further comprises a storage capacitor and a voltage clamp coupled to a power rail and the driving circuit is controlled such that an average current conducted through the storage capacitor and the voltage clamp is positive.

19. (Previously Presented) The method of claim 6, further comprising:

maintaining an average positive current through a storage capacitor and clamp circuit.

20. (Previously Presented) The data storage device of claim 7, further comprising:

a storage capacitor and voltage clamp coupled to the driving circuit, wherein the controller is configured to maintain an average positive current through the storage capacitor and voltage clamp when driving the positioning motor with the recirculation current is enabled.

21. (New) The motorized mechanism of claim 13 wherein the controller is configured to generate the control signals in the second mode of operation such that an average current conducted through the storage capacitor and the voltage clamp is positive.